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(12) UK Patent Application (19) GB (11) 2 217 677 A (13)

(43) Date of A publication 01.11.1989

(21) Application No 8803810.4

(22) Date of filing 18.02.1988

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(51) INT CL^{*}
B65D 25/38 17/00

(52) UK CL (Edition J)
B6D DFX D17 D6 D7M
U1S S1103

(56) Documents cited
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US 4109817 A

(58) Field of search
UK CL (Edition J) B6D DCE DFX
INT CL^{*} B65D

(54) Easy-open can with straw

(57) An easy open can is provided with a retractable straw sealedly received therein; the straw being provided with a bellow-like section 21 near its top end. The straw is fixed in place within the can body by way of mounting seat which comprises a flange 12 welded to the underside of the cap of the can and an open ended tube 10 which locates the bellow-like section of the straw and is aligned with an opening 2 in the can end. The suppressed straw is able to pop out when the pull ring 3, externally disposed on the end of the can, is pulled upward to remove the cover-ring of the opening 2. The bottom end of the tube includes an inwardly extending flange to retain the lower end of the bellow-like section, and the flange 12 includes a small hole 13 to admit air during use of the straw.

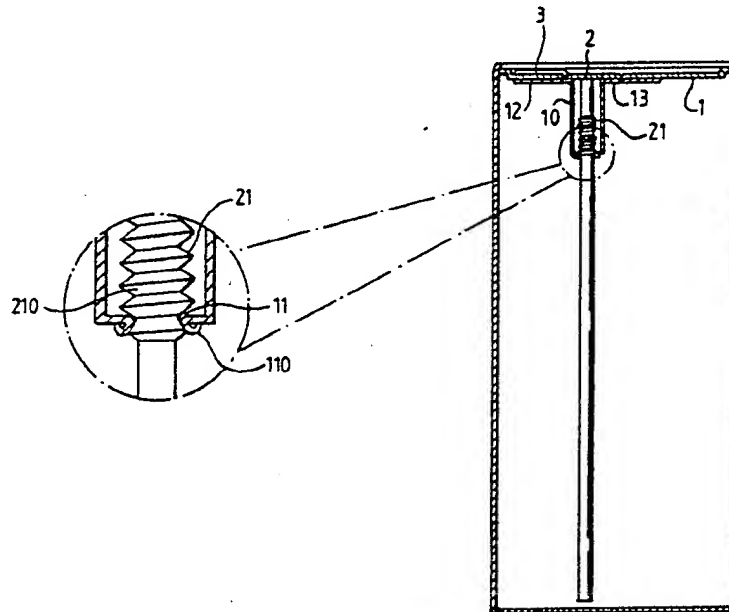
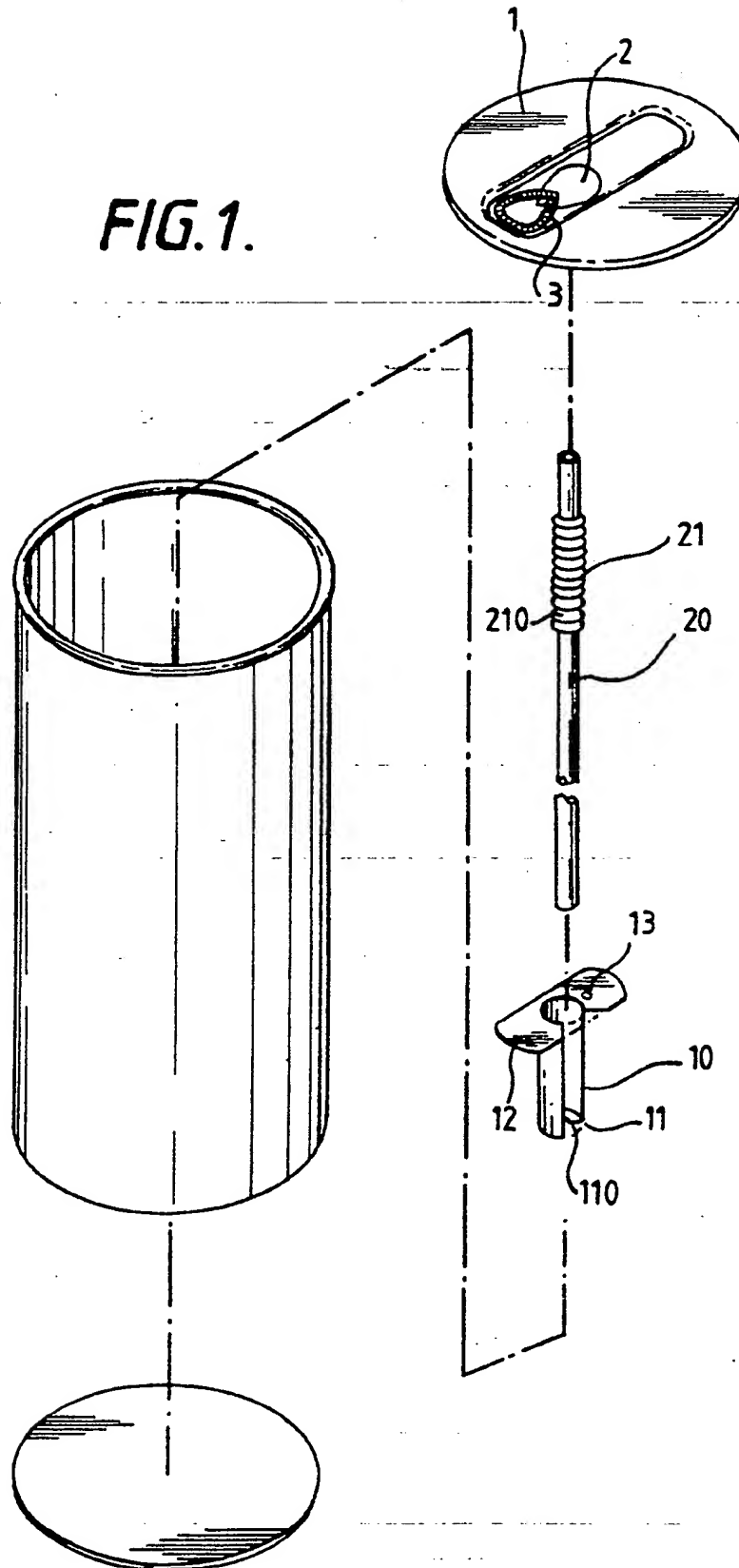


FIG. 2.

FIG. 1.



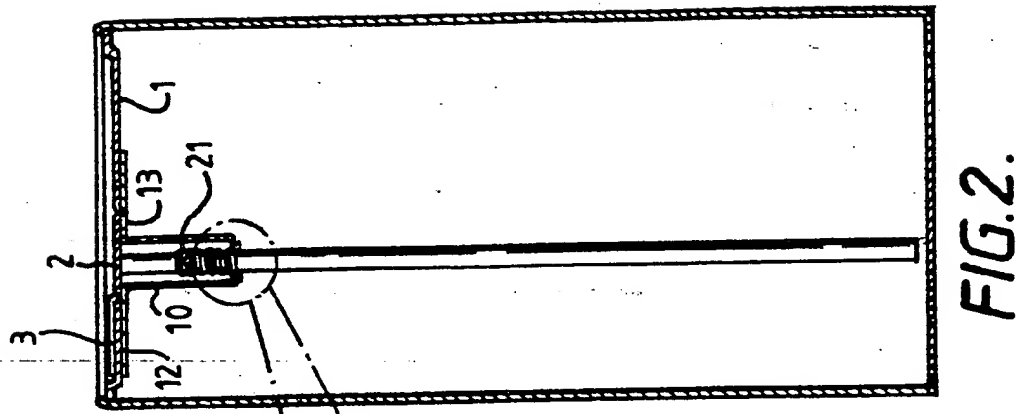


FIG. 2A.

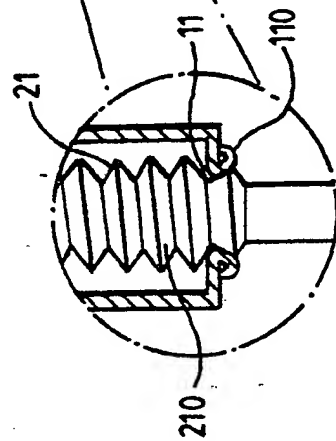


FIG. 2B.

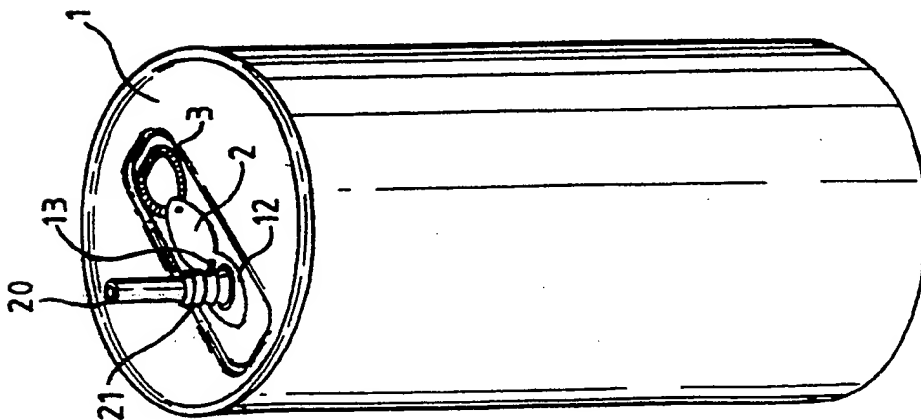
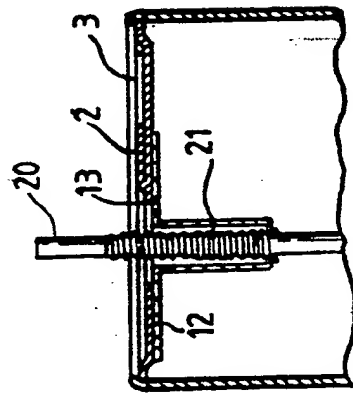


FIG. 3.

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AIR-TIGHT CAN FOR CONTAINING BEVERAGE WITH
A RETRACTABLE STRAW SEALEDLY RECEIVED THEREIN

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SUMMARY OF THE INVENTION

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The present invention relates to an improved air tight can, or so called top-top can for containing beverage or the like, which is provided with an elongate straw received within the sealed can and being able to pop out for use when the covering on the top can of said can is removed by way of pull ring so that people can enjoy the drinks contained therein in a more convenient and hygienic manner.

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Normally, people open top-top cans by pulling up the attached pull rings and pour out the drinks contained therein for use; or make use of elongate straws to suck up the beverages therein. However, in the first approach, dust or unclean materials might also be introduced into the cups used by people along with the poured drinks; in the second approach, the straws are unavoidably contaminated when fetched by human hands, and the health of the people drinking beverages contained in cans through the contaminated straws

are readily endangered. Thus, the conventional ways of dealing with the caned drinks are not satisfactory enough from the hygienic point of view.

5 In order to eliminate the above cited disadvantages in consideration of public health and operative convenience, the present inventor has devoted a long time to come up with a conveniently operable and hygienic air tight can or so called pop-top can for containing beverages or the like.

10 Therefore, the primary object of the present invention is to provided an improved air tight can or so called top-top can with a retractable straw sealedly received therein which is located in place within the can by way of a mounting seat fixed on the underside of the top cap of the can with the straw going through a tube section thereof; the upper part
15 of the present straw is provided with a bellow-like section, permitting the straw to be flexibly compressible to such an extent that the same can be retractably received within the can and pop out over the top cap for use through an opening on the top cap when the covering of said opening is removed
20 by way pull ring. Thus, the beverage contained in the present can is able to be sucked up in a hygienic manner.

BRIEF DESCRIPTION OF THE DRAWINGS

5 FIG. 1 is a perspective view showing the exploded components
 of the present invention;

 FIG. 2 is a sectional view showing the inner structure of a
 sealed can of the present invention;

 FIG. 2A is an enlarged view showing the detailed structure of
10 the bellow-like section of the straw in engagement
 with the bottom of the mounting seat;

 FIG. 2B is a partial sectional view showing the top end of
 said straw extending over the cap of the present can
 ready for use;

15 FIG. 3 is a perspective view showing the topmost end of the
 received straw popping out over the top cap of the
 can for use.

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DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

5 Refer to Fig. 1, the present air tight can or top-top
can comprises a straw mounting seat 10 consisting of a
circular flange portion 12 and a hollow tube fixed under said
flange portion 12 with two opened ends, the bottom end
thereof is indicated by reference numeral 11. The mounting
10 seat 10 is secured to the underside of the top cap 1 of the
can by way of welding of the flange portion 12 thereto with
the mounting seat 10 located right in the opening 2 disposed
on said cap 1 so that when the covering of the opening 2 is
removed by way of a pull ring 3, the topmost end of the
15 retractable straw can pop out for use. The removed covering
is still linked to the cap 1 without being randomly disposed
by the drinker.

20 The elongate hollow straw 20 is structured to have a
bellow-like section 21 disposed near the top end thereof,
which consists of a plurality of wrinkle elements 210 and is
compressibly received in the tube section of said mounting
seat 10. The rest portion, below the bellow-like section
21, is located through the bottom opened end of the tube of
said mounting seat 10 with the lower tip of said straw 20
25 reaching the bottom of the can as shown in Fig. 2. In
assembly, the bottom end of said bellow-like section 21 is
forced through the opened end 11 having flared flange 110 and

located firmly in place as shown in Fig. 2A.

5 The retractable bellow-like section 21 is compressed to such an extent that the same can be resiliently received in the tube of said mounting seat 10 in production; and the topmost end of said straw 20 can pop out and extend over the cap 1 of the present can for use as long as the covering of said opening 2 is as shown in Fig. 2B so that the fluid contained in the can is able to be removed by suction.

10 In consideration of the balance of pressure, a small hole 13 is disposed on the circular flange portion 12 of said mounting seat 10, thus no vacuum state in the present can will be created as a result of continuous suction on the straw 20. As shown in Fig. 1 and Fig. 3, the location of said hole 13 is clearly illustrated.

15 The size of said hole 13 is so small that no fluid in the can is able to overflow in case of the can being toppled.

20 The feature of the present invention lies in the sealedly received straw disposed in the interior of the present can, and the straw being structured to have a retractable upper section defined in bellow-like form so that people can enjoy the drinks contained in the present cans in a more hygienic, secure and convenient manner.

CLAIMS

1. An airtight beverage can having an opening with a removable seal and straw-locating means attached to the inner side of the can top below the opening, and with a straw with a compressive bellows action mounted within the locating means to as to protrude when the seal is removed.
2. An airtight beverage can according to claim 1 in which the straw locating means comprises an open-ended tube welded to the inner side of the can top.
3. An airtight beverage can according to claim 2 in which the low end of the tube has an inward-directing flange of such size that during manufacture the bellows section of the straw can be inserted and will be retained.
4. An airtight beverage can according to claim 2 or claim 3 in which the side-wall of the tube has a small hole to admit air during use.